

**Multi-part Looked-Up Table Fields and  
Its Use in Data Processing Operations involving Multiple Tables of a  
Relational Database**

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**ABSTRACT OF THE DISCLOSURE**

In accordance with a first aspect, a software component is equipped to identify non-looked-up table fields and looked-up table fields to be grouped, and table fields having aggregate functions to be performed in their row values in a data processing statement, and automatic inclusion with a SQL statement a subquery to generate a grouped derivative table comprising grouped non-looked-up table fields and aggregated table fields, and one or more appropriate JOIN clauses joining one or more target tables from which the table fields are to be looked up with the grouped derivative table. In one embodiment, the looked-up table fields are expressed in a multi-part form. In accordance with a second aspect, a software component is equipped to automatically expand table fields available for inclusion in a data processing operation to include table fields of a target table of a look-up table field, and selection of aggregation function.

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